

The Nexus between Land registration and Environmental Hazards in some Urban Centers in Cameroon

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ABSTRACT: *The issue of land administration was and is still gaining a lot of traction in contemporary research as scholarly agendas attuned to this issue continue to proliferate because peoples' attachment to land predates recorded history. That is why development agencies, urban development professionals and academicians in urban management issues now concur that the urban development process in less developed countries is most often than not unsustainable as the polemics in land registration is not responsive for environmental sanity given the fact that environmental hazards are the rule rather than the exception. Such a trend is frightening that a pragmatic and timely research is indispensable to diagnose the intriguing situation. This paper unravels and disentangles the polemics in the land registration process in some Cameroons' urban centers (Bamenda, Yaounde, Douala and Bafoussam) in a bid to establish the nexus between land registration and environmental hazards so as to enshrine sustainable solutions into concrete policy options. Using primary and secondary data sources, the findings aver that the land registration in Cameroons is not responsive for environmental vibrancy due to some inherent stalemates which have obfuscated the procurement process. These stalemates inter-a-lea include; inappropriate regulatory frameworks through procedural difficulties, institutional weaknesses, political exploitation and fraudulent practices. These impasses invariably breed frustration and friction to would be land/home owners who are obliged to bypass such cumbersome processes and construct in off limit terrains which are vulnerable to the caprices of environmental hazards like floods and landslides, casting doubt on government's ability to instill a more sustainable land registration system for enhanced environmental productivity. If the land administration process is well-structured and revolutionized via good governance, this might reconfigure uncontrolled urban development to curtail such vulnerabilities to environmental hazards.*

KEYWORDS: Land registration, Environment, Cameroon, nexus, Cameroon, hazards

INTRODUCTION

The issue of land administration was and is currently gaining a lot of traction in contemporary research, given the fact that peoples' attachment to land predates recorded history. Land is and always was, intimately linked to the various facets of human livelihoods (Berhanu, 2015). Cameroon's formal law classifies land as private, public or national. In order for land to be privately owned, it must be titled and registered. The interest in/or right to land is thus founded upon the title or ownership which is authenticated through land registration (Shahidu *et al*, 2015). Land registration is the processes of determining, recording and disseminating information about the ownership, value and use of land and its associated resources when implementing land management policies (UNECE, 1996). Such a legal access to land is a strategic prerequisite for the provision of adequate shelter for all and for the development of sustainable human settlement in both urban and rural areas (UN-Habitat, 1997).

No doubts, with more than half of the world's population now living in urban centers (UN Bulletin, 2007), this is the urban century. As such, the number of people-to-land relationships, particularly in urban areas is at its crescendo. That is why the issue of people to land relationship appear to be the primary source for a plethora of contemporary environmental challenges. For instance, when urban land-to-urban people relationship are poorly managed, it negatively impacts the quality of urban land and thus a deterrent to the realization of sustainable urban development and vice versa, opening flood gates to environmental hazards (Berhanu, 2015). People to land relationships are, therefore, considered as keys to getting governance right (Palmer *et al* 2009). The failure to adopt appropriate land use policies and management practices at all levels of governance remains one of the primordial causes for increased vulnerability of urban residents to environmental hazards through the occupation of hazard-prone zones. Land-use planning and restrictions are, therefore, becoming increasingly important as a means to ensure the effective management of land-use, to protect and improve the environment as so as to ensure sustainable urban development. Africa is urbanizing fast. Its rate of urbanization soared from 15% in 1960 to 40% in 2010 and is projected to reach 60% in 2050 (UN Habitat, 2010). Such a trend is expected to change the profile of the continent and by so doing challenging policy makers to harness urbanization for sustainable and inclusive growth. Based on this, a pragmatic and timely research is indispensable to curtail and ameliorate the deteriorating situation of the urban environment. For this reason, the issue of urban management is at the core of the continent's development challenge. Urban management and planning policies, therefore, need to be configured and adequately streamlined to help cities plan ahead in order to curtail the associated reverberations (environmental hazards) it comes with it. In this perspective, it is urgent to focus on the hitches in the land registration process and find ways and means to influence associated government policies and actions for environmental sustainability.

According to Article 17 of the UDHR 1948; "Everyone has the right to own property alone as well as in association with others. No one shall be arbitrarily deprived of his property". Article 25 further declares that: "Everyone has the right to a standard of living adequate for the well-being of himself and of his family, including food, housing and necessary social services". As land is a

universal property and right to land is also universal, land laws, land administration and land management should also be responsive to such universal human interests. Understanding and managing the dynamics of urbanization and addressing issues of secure land tenure are, therefore, critical elements in enhancing environmental productivity in Cameroon. In view of this scenario, an important question to ponder on is: How can a perfect link be established between the complex stalemates underpinning land registration in Cameroon and their effects on the urban environment in a context where the trend of urbanization is rapid and environmental hazards are on the upsurge? This paper thus examines the connection between land registration in relation to environmental hazards with a special focus on the speed-breaks in the land title procurement process in Cameroon's urban centers.

THE PROBLEM

In 2011, Cameroon had an urban population of about 52.1% and an estimated average urban growth rate of 3.2% (UN-World Statistics Pocket Book, 2013). This situation will ultimately result in high pressure on land resources with the risk of increasing environmental hazards (ADB, 2009). The urbanization rate in Cameroon is estimated at 45% with an annual increase of about 6% to 6.5%. This indicator shows a strong migratory trend towards urban centers indicating that pressure on land has increased through the need for housing, public utilities and services. Despite these challenges, the land registration system has been unavailing as it has erected a series of obstacles which have convulsed environmental stability. The law that governs land in Cameroon is more than 45 years old: older than 87% of the country's population (Land Cam, 2021). The registration system is a direct replication from those retained from colonial masters (Ngwasiri, 1998), which represents a missed opportunity as applications for land titles are handled by a hierarchy of state bureaucrats who have produced a system which is worse than what they inherited from the Europeans. The time required to issue land titles to individuals on parcels of land bought within Cameroon's urban centers like Douala, Yaounde and Bamenda is long, bureaucratic, cumbersome, costly and time wasting. The final holder has to spend huge sums of money and wait for long before the land title is issued by the competent authorities. Worse still, issuance is plagued by procedural difficulties, mismanagement, corruption and administrative bottlenecks with the existence of many clientelistic intermediaries, placed between the administration and the prospective individual. This leads to dis-connections between the registration process and environmental stability as developers are obliged to bypass such a process and construct in marginal/off limit terrains vulnerable to the caprices of environmental hazards such as floods, landslides, accelerated erosion and rock fall.

MATERIAL AND METHODS

The Study Area

The Republic of Cameroon commonly referred to as Africa in miniature is conspicuously situated at the hinge of Africa, surreptitiously termed as the armpit of Africa. Cameroon lies between longitudes 8° and 16° east of the Greenwich Meridian and latitudes 2° and 13° north of the Equator (Ndi, 2020). It shares boundaries with Nigeria to the West, Chad to the North-East, Central African

Republic to the East, Gabon, Equatorial Guinea and the Republic of Congo to the South and the Gulf of Guinea to the South West (Figure 1). The country boasts of a population of about 29.1 million (Worldometer, 2024), with an annual growth rate of 2.2% and an urban growth rate of 3.2% between 2010 and 2015 (UN-World Statistics Pocket Book, 2013). According to Worldometer (2023), 57.9% of the population is urban (16.5million people).

The physical terrain of Cameroon displays a diversity with coastal plains in the South-West, mountains in the West and plains in the North, all surrounding plateau regions. Cameroon displays a tropical climate along the coast and semi-arid and hot in the north. Geological factors make Cameroon prone to natural hazards, whilst a combination of social, economic, demographic, health and environmental factors make Cameroon highly vulnerable to disaster risks (Bang, 2013). Cameroon's geology is part of the complex history of plate tectonics that caused the rifting of the South Atlantic continental plates. This created extensive strike-slip faults and shear zones that extended into Cameroon (Binks and Fairhead 1992).

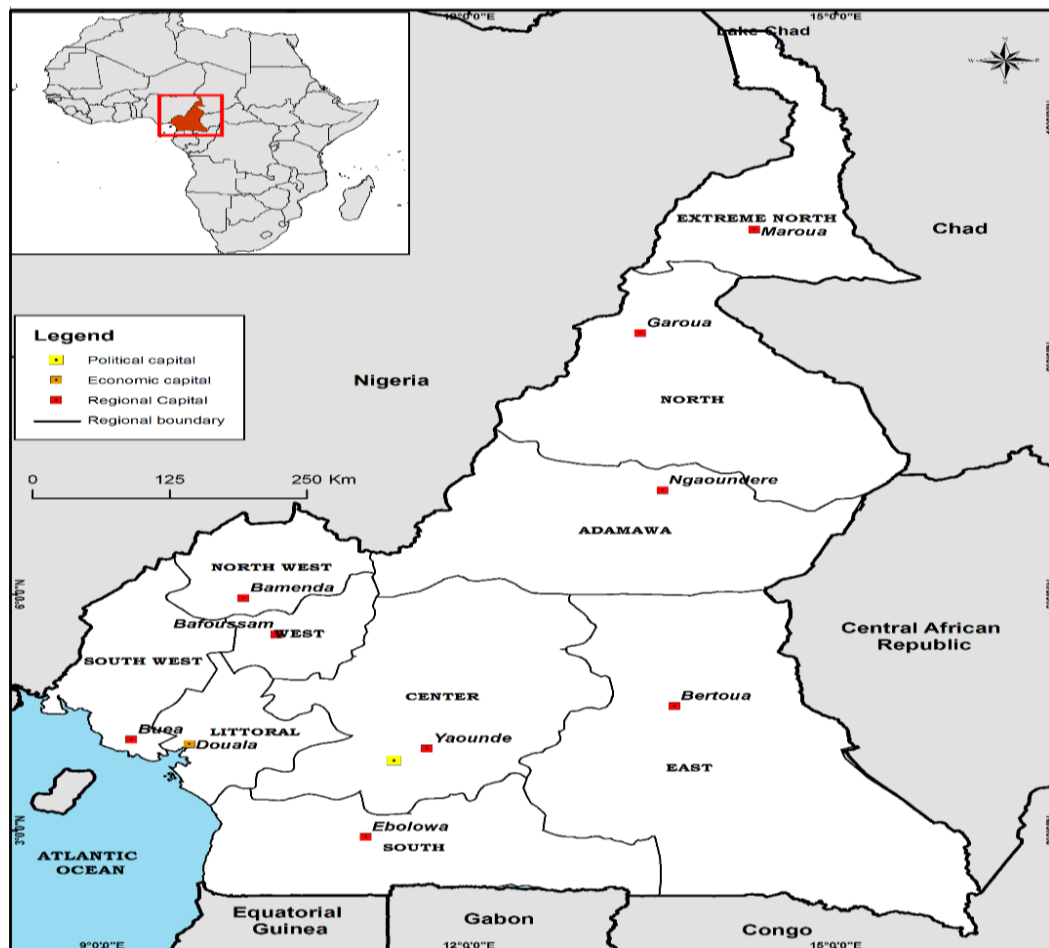


Figure 1: Location of Cameroon in the African Continent

These fault and shear zones are responsible for the active volcanic and seismic activity in the country (Dumort 1968; Hedberg 1968; Nni 1984), which occurs dominantly on the Cameroon Volcanic Line (CVL). Thus, Cameroon’s geological setting and past tectonic history makes her one of the worst countries affected by rapid onset of natural hazards in Africa. The frequency and destruction caused by such geophysical and hydro-meteorological hazards along the CVL are becoming more numerous and disastrous affecting livelihood assets in the country including human, social, financial, natural and physical capital. The country is becoming more prone to volcanic eruptions, toxic gas emissions, earth tremors and landslides and floods which occur on a regular annual pattern (Bang, 2008) which does not portray a national spatio-temporal uniformity (Fogwe, 2010) as shown on Figure 2.

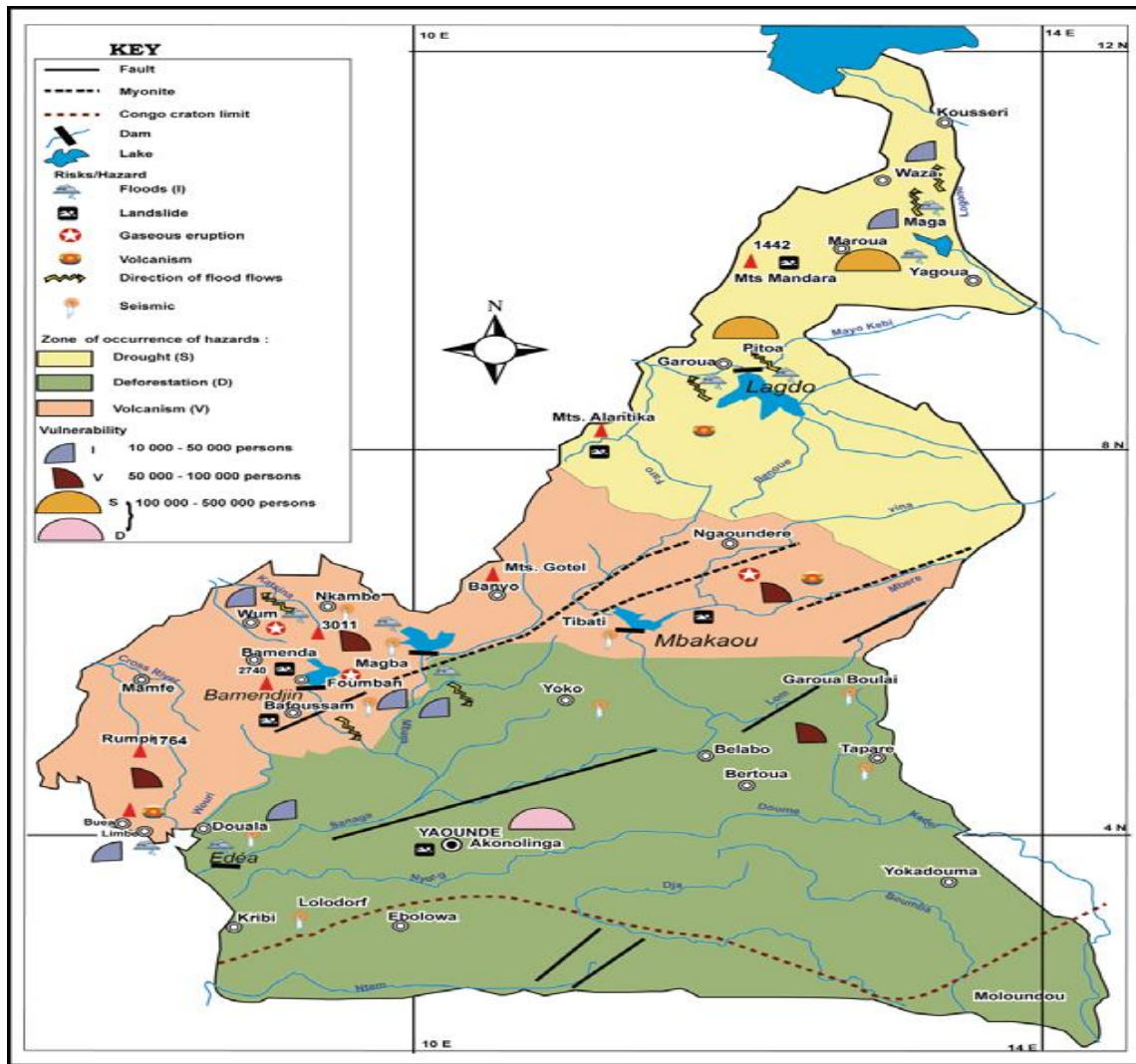


Figure 2: Main Hazards Recognized in Cameroon
Source: Tchindjang (2015)

These hazards are often transformed into disasters, causing more and more fatalities, injuries, disability, disease and economic damages; exacerbating the already poor economic and social burden of the already impoverished state where 22.1% of urban dwellers and 49.9% of the rural population are living below the poverty line (IMF, 2008). These hazards and disasters do not only pose a significant threat in achieving the millennium development goals, but the socio-economic and political atmosphere in the country makes the poor even more vulnerable to disasters.

RESEARCH METHODS

The methodology involved in obtaining data for this study entitled; The Nexus between Land registration and Environmental Hazards in some Urban Centers in Cameroons is the standard social science methodology involving data collection and data analysis acquired from both primary and secondary sources. Primary data sources included a household questionnaire survey administration that was carried out with 300 inhabitants in zones prone to environmental hazards in the different urban centers of Cameroon under study (Bamenda, Yaounde, Limbe and Douala). The questionnaires probed on the stalemates involved in land registration and the relationship between these hiccups and environmental hazards. These questionnaires were administered using the random sampling technique as it accurately reflects the characteristics of the entire population and allows for unbiased data collection which leads to unbiased conclusions. Questionnaire administration was accompanied by intensive field investigation and on-the-spot appraisals. This was followed by in-depth interviews with government stakeholders saddled with urban planning and environmental management (the Regional, Divisional and Sub Divisional Delegates of the Ministries of Surveys, State Property and Land Tenure and Housing and Urban Development) with a stake in the land registration. Data collected from questionnaires were complemented with direct field observations. Secondary sources included a historical and contextual review of relevant literature on the evolution of the land administration process in Cameroon, existing archival sources and sundry information. Qualitative data was subjected to thematic analysis whereas quantitative data was assembled and presented in tables, histograms and pie charts. This was followed by in-depth explanations aimed at addressing the issue at stake.

RESULTS AND DISCUSSIONS

Perhaps, an important question which begs for scientific investigation is; what are the obstacles to land registration and what link exists between these obstacles and environmental hazards in some urban centers of Cameroons? As non-empirical evidence rightly suggests, between 30 to 50% of urban residents in the developing world lack any kind of legal document to show they have tenure security (Allain, 2015). From such a startling revelation, it is ostensibly glaring that a plethora of hiccups have deterred access to land. Results from field work corroborates this assertion as a greater percentage of respondents in Cameroons' urban centers under study lamented that the process of land registration is saddled with a plethora of controversies. These includes; the labyrinth (complicated/confusing) and cumbersome registration process, administrative bottlenecks borne by corruption through the existence of clientelistic intermediaries, administrative/bureaucratic inertia and high costs. In absolute terms, 92% of respondents in Yaounde, 96% in Bamenda, 98% in Douala and 89% in Bafoussam (Figure 3)

championed the fact that the land registration process was very expensive while 94% of respondents in Yaounde, 90% in Bamenda, 92% in Douala and 78% Bafoussam were unanimous that the existence of clientelistic intermediaries stands tall. Corruption in the land registration process was championed by 96% of respondents in Yaounde, 100% in Douala, 100% in Bamenda and 95% in Bafoussam. Besides, 91% of respondents in Yaounde, 93% in Bamenda, 94% in Douala and 91% in Bafoussam averred that the existence of clientelistic intermediaries has bedeviled the land registration process and therefore convulsed land title ownership.

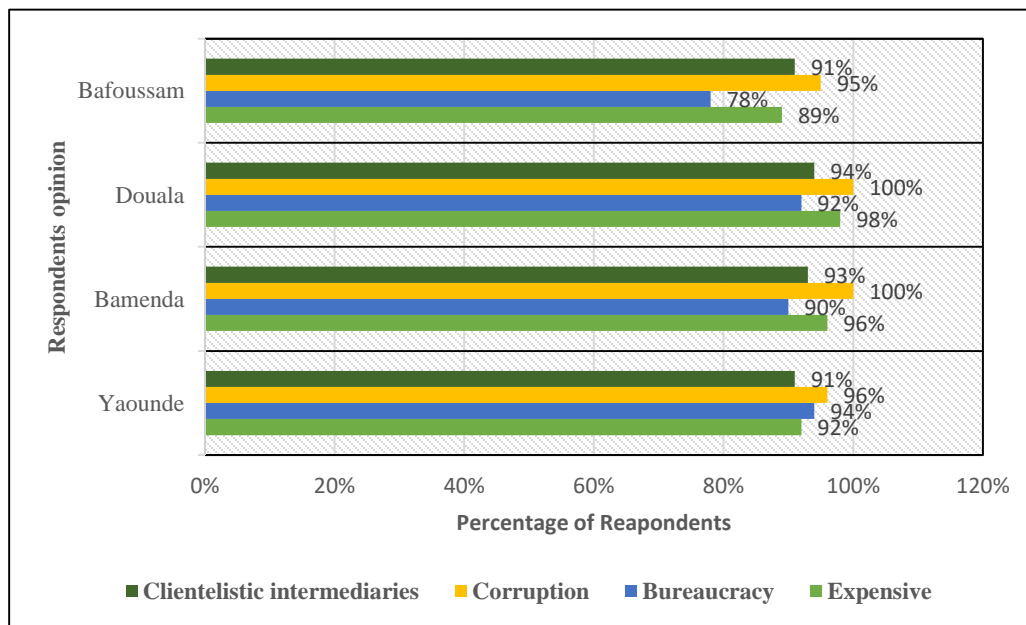


Figure 3: Obstacles to the land registration process
Source: Field work

The Bureaucratic Registration Process

Legal access to land which is authenticated by land certificate ownership is a strategic prerequisite for the provision of adequate shelter for all (UN-Habitat report 1997). The most comprehensive land governance legal framework in Cameroon is the 1974 land tenure ordinance. According to this ordinance; 'All land in Cameroon belongs to the state'. This implies that individuals or communities are only granted access to land. Based on this, land registration is the only formal way of acquiring land in Cameroon. The process of obtaining a land certificate (land registration) is governed by Decree No. 76/165 of 27 April 1976 as amended and supplemented by Decree No. 2005/481 of 16 December 2005.

According to Ngwasiri (1998), every Cameroonian desirous of registering a piece of land should complete an application form in four copies, one of which must bear a fiscal stamp with a legalized photocopy of his/her national identity card. These documents should be accompanied by another

which describes the nature of the property. The law requires that the description must specify the situation of the land, its area, nature of occupation or exploitation, its estimated value and the details of the charges with which the land is encumbered. After completing these documents, the applicant deposits his/her application at the office of the Divisional Officer of his/her municipality who in turn publishes the details in the form of an administrative order. The Divisional Service of Land tenure will then publish within 15 days, an extract of the request. Thereafter, another date is fixed for members of the consultative board to meet and then proceed to the land in question to determine whether the applicant occupied or exploited the land before August 5, 1974. If the board is satisfied with the proof of occupation or exploitation by the given date, it takes measurements and marks the boundaries with survey beacons (pillars) provided by the applicant. The applicant pays the cost of demarcation to the Divisional land revenue collector against a receipt.

This is followed by a survey exercise consisting in the preparation of a plan of the plot and a detailed report signed by all members of the commission set up for that purpose. The applicant pays a fee of 40.000frs for the survey. The remainder of the process consists in the application transiting through four other offices in the region of origin before being forwarded to the Ministry of Housing and Urban Development in Yaounde, the capital city. The file again shuttles through six offices in the ministry before a final decision may be taken to publish the fact of application in the State Official Gazette. The publication is a warning to the public that if no one opposes the application within one month, a certificate of title would be issued to the applicant over the land described therein. After the statutory one month, and in the absence of any opposition or litigation, the file is returned to the region of origin and a certificate of title is then issued to the applicant, after his file would have gone through at least fourteen offices (Ngwasiri, 1998). The file is also signed by the Senior Divisional Officer of the division where the land is located. The applicant then obtains the land title from the land Registry of the Ministry of Surveys, State Property and Land Tenure.

At first glance in reference to the above stages, it may appear that the process to land administration in Cameroons urban centers is well streamlined and adequately configured. On a closer inspection, however, field work revealed the contrary. Interview responses from stakeholders in the Ministry of Surveys, State Property and Land Tenure in Cameroon estimate the time taken to obtain a land certificate to be 6 months. But this is far from being the reality as the process at times may even take decades. Data garnered from Figure 4 reveals that of the few respondents who claimed to own a land title, 19% noted that it took between 2 to 5 years, 34% noted that it took between 5 to 10 years while the greatest majority (47%) validated between 10 to 20 years.

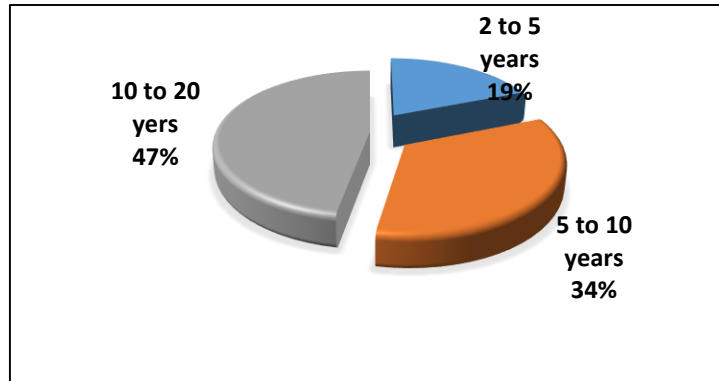


Figure 4: Average number of years involved in obtaining a land title in Bamenda
Source: Field Work

Questioning such a wide discrepancy in the number of years involved, most respondents lamented that the stages in the procurement process were poorly defined and not adequately streamlined. Field responses in Bamenda, capital of the North West Region of Cameroon indicated that 82.7% of the respondents did not own a land title as against 7.8%, while 9.5% indicated that they had completed and submitted their applications but, however, vetting and final approval was pending. The high percentage (82.7%) of those who acknowledged not to have had land titles is corroborated by empirical data from North West Regional Delegation of the Ministry of Surveys, State Property and Land Tenure (Figure 5).

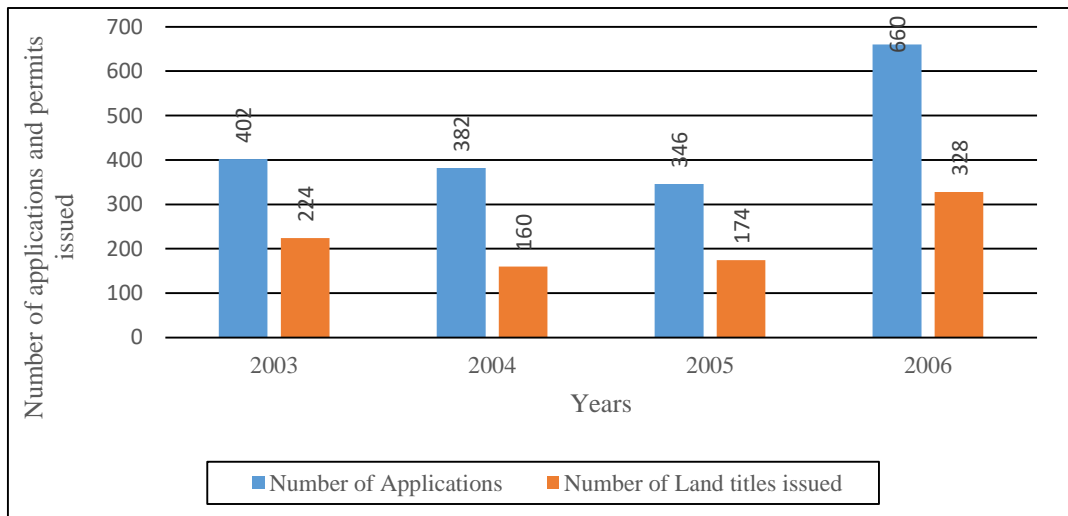


Figure 5: Land Certificates applied for and issued between 2003 and 2006
Source: North West Regional Delegation of the Ministry of Surveys, State Property and Land Tenure

As shown on figure 5, the year 2003 marked a total of 402 applications for land titles submitted to the North West Regional Delegation of the Ministry of Surveys, State Property and Land Tenure. From this total, 224 land titles were issued (55.8%) while 178 (44.2%) were rejected. In 2004, 382 applications were submitted and 160 land titles (41.9%) issued while 222 (58.1%) were rejected. In 2005, from a total of 346 applications submitted, 174 (50.2%) land titles were granted while 172 (49.8%) were rejected and in 2006, 660 applications were received and from this total, 328 (49.7%) land titles were issued as against 332 (50.3%) applications rejected. Even when applicants are bent on engaging the process from the genesis to its revolution before the commencement of development, applications hardly go through due to rejections at certain stages of the process. Despite the departmentalization of the procedure for obtaining land certificates in Cameroon, success is far from being achieved because` applications for registration have become scarce or even inexistent (ADB, 2009). This could be the probable reason why between 2003 to 2006 (Table 1), out of a total of 1790 applications submitted to the North West Regional Delegation of the Ministry of Surveys, State Property and Land Tenure, only 886 (49.4%) land titles were issued as against 904 (50.6%) applications rejected.

Table 1: Land certificates issued compared to applications (2003-2006) in Bamenda

Year	Number of Applications	No of Land titles issued	(%) Issued	No of land titles rejected	(%) Rejected	General Remarks
2003	402	224	49.4%	178	50.6%	No significant increase in the application for or the issuing of land titles
2004	382	160		222		
2005	346	174		172		
2006	660	328		332		
Total	1790	886		904		

Source: North West Regional Delegation of the Ministry of Surveys, State Property and Land Tenure

Such controversial revelations (Table 1) are in line with the findings of the Ministry of Surveys, State Property and Land Tenure in Cameroon which stressed that in the early 2000s, less than 2% of the land in Cameroon was registered (cited in Anne-Gaëlle, 2013). According to a Land Survey Extract in the Ministry of Surveys State Property and Land Tenure, there is an average of 10 000 applications for land certificates nationwide which does not even represent 1% of the potential demand based on 4 million households. Along similar lines, the ADB (2009), noted that the rate of establishment of land certificates is extremely low and after more than 35 years since the unification of East and West Cameroon and the subsequent merging of the two land tenure systems, an estimated 150 000 land certificates out of 3 000 000 potential parcels of land have been issued throughout Cameroon. These figures according to Ndi (2017) does not even cover the number of households in the town of Yaounde, capital of Cameroon with over 4 million inhabitants.

Such findings counteract a UN-Habitat report (1997), which stressed that legal access to land is a strategic prerequisite for the development of sustainable human settlements. Such revelations are

not sustainable for contemporary urban development as recent land reforms in Cameroon like that of 2005 which streamlined and enhanced the procedures for obtaining land titles by reducing the number of steps and institutions involved have hardly yielded fruits. Given this current state of affairs and mindful of the fact that the registration process is very slow and cumbersome, people who submit applications for land titles in environmentally challenged locations could not be checked because the bureaucracy involved does not warrant them to withstand such a long procedure. They are forced to construct in such environmental marginal locations prone to the caprices of environmental hazards with the notion that these ecological reservoirs would continue to provide more and more resources unabated, forgetting to know that nature has its way to resurrect from this mishap by sending feedbacks shocks which undermine the very survival of mankind (Tassah 2018).

The fact that the land registration process is arduous and tortuous is the root cause for the development of quite an avalanche of informal settlements in hazard prone zones to the extent that today a greater proportion of the inhabitants of Bamenda have no secure tenure of the lands they occupy. This substantiates the view that the regulatory framework governing the delivery of planned residential land in Cameroon has facilitated the development of uncertified structures in environmentally questionable locations prone to hazards. Therefore, if the land registration process was well defined and adequately streamlined where people could apply and obtain land certificates within the required time, environmentally challenged locations like slopes and swamps would have been spared from habitation.

Corruption

Large-scale fraud has daunted the land registration process. Interaction with respondents in Cameroon's urban centers during field work revealed that the land registration process has been convulsed by fraudulent practices. A legal statutory precedent which is inherent in the procurement of land titles in Cameroon is that the amount of money paid in registering a piece of land must be commensurate to its value. This implies that the higher the land value, the higher the cost incurred in titling that piece of land and vice versa. Most respondents, however, bemoaned that the manner in which a piece of land is assessed in order to determine its value and cost so as to facilitate the registration process was a subject of much controversy. According to them, the amount of money paid for land parcels with lower land values was over bearing in certain instances when compared with plots of land in locations with higher land values, all due to corrupt practices. In addition to the titling fees required by law, respondents lamented that they have had to cope with requests by administrative officials who act as middlemen between the individual in question and the government for illegal payments to facilitate the registration process. As noted by a respondent at Ntamulung (Bamenda II Sub Division); "If an applicant decides to by-pass such middlemen and relate directly with the right authorities, the entire process might even be longer than the required time". As a result, some people especially the urban poor who are unable to withstand such astronomical costs are forced to perch on unplanned risky swampy/sloppy locations in environmentally challenged zones, vulnerable to environmental hazards. A majority of such

inhabitants thus live with informal tenure systems as their occupation of land is either illegal, quasi-legal, tolerated or legitimized by customary or traditional laws which is not recognized by competent state institutions. The fear of eviction from such environmentally marginal zones prevents them from investing to make such homes durable and better for habitation, reasons why most of these houses are always in transit (Ndi *et al*, 2017). Their very low resilience means that even small-scale hazards of low magnitude is translated into serious environmental disasters.

Besides, wealthy members of the political class/business tycoons have also configured the land registration process to suit their whims and caprices at the detriment of the environment. This validates the findings by Sellers (1999) that in the North West region of Cameroon over, 83% of land titles owners were claimed by elites, business owners or state bureaucrats through unorthodox means. As a matter of fact, on August 17 2015, the leader of a leading opposition party in Cameroon took the population of Bamenda (capital of the North West Region) aback, when he led a protest march with councilors and mayors of Bamenda II and III municipalities to express their disdain and frustration over the undue issue of a building permit in a marshy area at Mile Four Nkwen to a business tycoon for the construction of an industrial edifice (Photos 1 and 2). This situation was described by these protesters as ‘an environmental terror’. This parcel of land until recently was prohibited from reclamation due to the fact that it is a hazard prone with a bill board planted and inscribed: “No land Reclamation.” The disgruntled councilors, therefore, paraded placards expressing their disgust, calling on administrative authorities to stop the issuance of land certificates and building permits on marshy areas and other state lands for real estate and industrial development in hazard prone zones in Bamenda.



Photo 1: the land reclamation site



Photo 2: Building permit number duely issued by the Bamenda City Council

In the course of this protest, the mayor of the Bamenda III council averred that; there is a recent mad rush in the occupation of marshy areas in Bamenda town which, if left unchecked, would spell doom for the city. According to him:

“We are here to express our disdain on the recent urban disorder in Bamenda. We protest the issuance of a building permit to this business tycoon. The road leading to the slaughter house has been blocked and the Land Law talks of leaving a setback of 25m from the river, before reclamation. If that was respected, we would not have been here today. Here, a business tycoon is constructing an industrial edifice less than 3m from the banks of the stream. For the past weeks, the Mile Four stream has over-flooded as a result of the ongoing reclamation in this area. This is just an example of what will happen in other marshy areas like Mile Six Nkwen, where the same thing is ongoing” (The Post Weekender, No 01653, August 2015)

Quizzed why a permit was approved on an area prone to the caprices of environmental hazards (floods) and protected by laws governing town planning, the Government Delegate to the then Bamenda City Council (BCC) affirmed that:

“I issued the building permit because the business tycoon gave us a technical file with appropriate studies proving that they could develop the area. In addition, a land certificate was presented by the company that they owned the land. There was just nothing that could stop the B.C.C from issuing the building permit,” he stressed. Besides, he noted; the law allows anyone who shows prove of the technical ability to develop such lands (The Post Weekender, No 01653, August 2015).

The explanation of the Government Delegate was less tenable because the 2004 laws of town planning regulations in Cameroon prohibits personal ownership and construction on hazard prone/environmental marginal lands. His idea of a ‘technical report’ was, therefore, nothing to go by. No doubts, reports from the ‘Eye News Paper’ (August 18, 2015) noted that the business tycoon must have lavished the City Council authorities with bribes. This, according to them is attributed to corruption as some government officials involved in land registration usually compromise and jeopardize the integrity of the process by fraternizing with defaulters through bribe taking and by so doing granting land titles to individuals in neighbourhoods liable to environmental hazards.



Plate 1: Resultant Environmental Hazards (floods) at Mile 4 (Nkwen)

Balgah (2013) shared this view and concluded that corrupt practices manifested in the granting of land titles on protected areas (risk zones) by the workers in the different land administration offices and the individual land developers have downplayed the efficiency of land regulations. The end result is environmental decay opening flood gates for environmental hazards. True enough in the course of every rainy season since the construction of this industrial edifice, Nkwen is often cut from the rest of Bamenda during heavy rains due to floods at Mile Four Bridge located adjacent to this industrial complex (Plate 1). On the 7th of September 2022, traffic was again slowed for several hours during the early evening hours of Wednesday 7 September 2022 along the Bamenda-Bambui road due to flooding at the bridge linking Mile three and mile four Nkwen. This largely accounts for the reasons why individuals, especially the rich own land titles in environmentally challenged locations (Bamenda Station escarpment and the swampy area around Mile Four in Bamenda III and Mulang in Bamenda II) where environmental hazards such as floods, landslides is rife. However, if urban growth in this hazard prone location is accompanied by adequate building standards and urban planning that takes account of the risk factor, disaster can be managed and even reduced.

Expensive Land Registration Process

The very expensive nature to procure a land title is one of the root causes for the occurrence of environmental hazards in Cameroons urban centers. According to the Technical Adviser in the Ministry of Surveys State Property and Land Tenure (Mr Shu Corneluis, 2018), the 1991 Finance Law in Cameroon defined procedures for payment of land titles. According to the law, the price to title is 1m² for rural land is 1frs while for residential purposes, it is 10frs per m² and 20frs per m² for urban land. Besides, the documents to be accompanied in the application for a land title must include a detailed description which specifies the situation of the land, its area, its nature of occupation or exploitation, estimated values and details of the charges with which the land is encumbered before members of the consultative board of land titles could visit the site. According to field interviews, most applicants for land titles complained that they are not in a position to provide such details. As a result, they are bound to hire experts on land tenure, surveying and valuation at very high costs. Besides, the transportation and feeding of members involved in the consultative board of land titles, which in some cases could number as much as 10 persons including technicians is borne by the applicant. Corroborating this current view, Kenfack (2023) noted that the formal procedure for registering land transactions in Cameroon takes 93 days and costs up to 18% of property value, compared to an average of just 81 days and only 10% of property value across sub-Saharan Africa as a whole

Such high, unpredictable costs discourage low-income citizens from titling their land. Anne Gaelle (2013) shared this current view and admitted that the 2005 reform on land registration in Cameroon reduced the length of time needed to obtain a land title from several years to less than one year on average yet, the number of land titles issued has not witnessed any significant increase since the reform was passed. Such a situation in Douala, economic capital of Cameroon for example raises land prices and excludes large sections of the urban population from legal and affordable land and housing, thereby forcing many people into various forms of unauthorized

development with the end results being environmental dysfunctioning in the form of floods on a yearly basis in the course of the rainy season (Table 2). As a result, most people have lost faith in the system and have developed their land without a land title.

Table 2: List of some affected Flood Quarters in Douala

No	Dates of flood occurrence	Some affected Neighbourhoods
1	July 1990	Parts of Nkolmitag and Km5
2	August 1993	Tergal, Nkolmitag, Brazaville, New Bell, Bibom, Sobom, Bilingue, Madagascar
3	June-July, 1996	Widespread but not recorded
4	August, 1998	Widespread but not recorded
5	2 nd and 3 rd of August	Nkolmitag and Village
6	August 2002	Nkolmitag, Brazaville, New Bell, Dibom, Bilongue, New Town
7	13 September, 2009	Bonanjo, Bonapriso, Akwa, New Bell
8	13 th July, 2010	Bonapriso, Bali, Bepanda
9	6 th August, 2011	Cite des palmiers
10	22 August 2011	Makepe, Missoke, Bepanda, Bonapriso, Deido, New Bell
11	26 th June 2012	Youpwe, Mebanda
12	30 th June 2012	Mabanda, Bepanda, Bonapriso
13	16 th April 2013	Makepe, Missoke, Ndogpassi
14	28 th July 2014	Bonapriso, Ngangue and Newbell, Bois de Singes, Bonapriso
15	19 th & 20 th June 2015	Mabanda, Bois de Singes, Makepe, Ngangue, Petit Paris, Bonapriso, Bonamoussadi
16	July 3 rd 2017	Makepe-Misoke, Kondi
17	March 21 st 2018	Akwa, Makepe Misoke, Logbaba, Bonamoussadi
	June 2019	Bepanda, Newtown Aeroport
	June, July, August and September 2001, 2002, 2003 and 2004	Makepe Misoke, Logbaba, Bonamoussadi, Mabanda, Bois de Singes, Makepe, Ngangue, Petit Paris, Bonapriso, Bonamoussadi

Source: Fogwe (2004), Ndongo et al (2015) and Field Survey (2023)

A direct relationship thus exists between squatter settlements where environmental hazards are common and tenure insecurity in different neighbourhoods in Douala such as Mambanda, “Bois des Singes”, Missoke, Ngangue, “Petit Paris” amongst others. Such neighbourhoods are thus nothing short of volatile sources of fear, especially with every drop of rain while other low-lying neighbourhoods of Ngangue and Makepe, where flooding is perennial, suffer the brunt of it all (Table 2). The cancellation of many land certificates observed in recent years in Cameroon is proof of a form of land insecurity in unauthorized zones, though recognized as one of the engines of growth (ADB, 2009).

Confictual Governance

There is conflict in most of the functions performed by the different stakeholders in the land registration process in Cameroon. This has cultivated a general vagueness about the specific nature of the responsibilities involved, who bears them and consequently friction. In an interview conducted with the Director of Urban Development (DUD) in the Bamenda City Council (North West Region of Cameroon), it was realised that land titles are issued by the Senior Divisional Officer and Ministry of Surveys State Property and Land Tenure in areas that have been carved out by the Bamenda City Council (B.C.C) and stipulated in the April 2004 laws governing Town Planning in Cameroon as ‘risk-prone’ where environmental hazards (floods and landslides) are rife like slopes/swamps. There is, therefore, conflict in functions between the Bamenda City Council on the other hand which adheres strictly to town planning laws and the Ministry of Surveys, State Property and Land Tenure which issues land titles at times indiscriminately. As expounded by most respondents, such an overlapping and duplication of roles by government institutions (Regional delegations of the Ministries Surveys State Property and Land Tenure and Housing and Urban Development as well as their respective Divisional and Sub Divisional Delegations and the City Councils) have in synergy created a cumbersome process to land title registration. Before a land title is issued, an applicant is obliged to visit all the above listed institutions before the process can be conveniently crafted to set on its rails. The fact that functions tend to overlap amongst these various institutions is a potential source of conflict, inertia and inefficiency as the institutional collaborations that strengthens effective management are often very weak. Besides, the roles of some sectors are by passed or even diluted by those of other sectors. This has limited and stiffened the interaction and association between these stakeholders and by so doing, opening flood gates for further environmental decay as developers by pass such an overlapping gulf and carry out development projects with no land titles in areas which are not environmentally robust.

Less well known, but perhaps even more significant, is the fact that statutory land registration/regulations in Cameroon have placed considerable power and resources solely in hands of the central government at the detriment of decentralized sectors (municipalities/sub divisional councils). While the mayor masterminds the day to day running of the sub divisional council, he does not constitute an ordinary member in the Land Consultative Board (a primary organ in the land registration process which issues land titles). The head of the Land Consultative Board is instead the government appointed Divisional Officer. Due to such powers vested on the Divisional Officers by the law and given the fact that they are passers-by and might one day be transferred, they validate applications for land titles with a lot of impunity even in areas which are prone to environmental hazards like the case of the business tycoon already discussed. This also justifies the reason why Douala is renowned for haphazard development and collapsing buildings prone to flood hazards as was the case in 2003 where two buildings collapsed. This was also true of Noundere the same year.

Institutional Weaknesses

In the Ministry of Surveys, State Property and Land Tenure, the Department of Lands and the Department of Land Tenure lacks specialized staff in land management operations such as land inspectors, surveyors, valuers and controllers. Besides, an appraisal of the profile of some senior staff in this department further confirms the lack of expertise in geodesy, topography and photogrammetry. Such an already epileptic scenario is further convulsed by the absence of a comprehensive training and continuous upgrading strategy for all staff as the whole process is manual and not digital and thus time consuming. That is why conventional methods of land survey, preparation and upgradation of land records as well as maintenance of all related data for different parcels of land makes land administration inadequate and inefficient. Institutional weaknesses are further manifested in the domain of financial incongruities. According to the Af DB (2008), the financial resources provided for the operation of services in the Ministry of land tenure is very small (less than CFAF 2 million) for the Wouri and Mfoundi Divisions, harbouring the headquarters of the economic and political capitals of Cameroon respectively.

CONCLUSION AND POLICY OPTIONS

This paper has established the link between the land registration and the occurrence of environmental hazards in some urban centers in Cameroon. The findings have aptly revealed that the current disaggregated process in land registration is masterminded by inappropriate regulatory frameworks, procedural difficulties, political exploitation and clientelistic practices. These anomalies have proliferated and invariably breed frustration and friction to would be home owners who are obliged to bypass such cumbersome processes and construct in off limit terrains vulnerable to the caprices of environmental hazards. In order to ensure that the land administration process responds to contemporary and anticipated future-to-land relationships as a condition sine qua non to reducing the vulnerability of urban residents to environmental hazards in Cameroon urban centers, there is the need for a sustainable land management system. Sustainable land management is the use of land resources while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions” (UN Earth Summit 1992). As contemporary discourses rightly suggest ‘sustainable land management relies upon well governed urban land including sound land administration systems. Therefore, if the land administration process is well-structured via good governance through the bottom-top approach, such a revolution might re-configure and check uncontrolled land management to reduce the vulnerability of urban residents to environmental hazards. Developing good governance demands a harmonious relationship between people and land through strengthening policy and legal frameworks. This needs to be addressed by removing administrative barriers in addition to adequate monitoring and evaluation of the land administration exercise. The government should further equip regional services in the ministry of Surveys, State Property and land tenure with the required, efficient technical state-of-the-art equipment and logistics accompanied with qualified personnel.

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